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The Rochester Institute of Technology

Department of Communication

College of Liberal Arts

The Relationship between Cross-media Usage and Brand Recall in Advertisements:

A Test of Customer Engagement with Print and Digital Magazine Advertisements

by

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A Thesis submitted

in partial fulfillment of the Master of Science degree

in Communication & Media Technologies

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THE RELATIONSHIP BETWEEN CROSS-MEDIA USAGE AND BRAND RECALL IN
ADVERTISEMENTS: A TEST OF CUSTOMER ENGAGEMENT WITH PRINT AND
DIGITAL MAGAZINE ADVERTISEMENTS

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Abstract

This study investigated the effectiveness of advertising using a cross-media approach. A laboratory experiment with a randomized controlled trial and a sample of college students (N = 34) was used to test whether the level of involvement was higher for tablet or print advertisements. Subjects were divided into two groups: those who saw the advertisements in print and those who saw them on tablets. Contrary to expectations, brand recall and purchase intent were higher for those viewing print than for tablet advertisements, although respondents considered interactive advertisements more engaging. One explanation is that most of the participants were so immersed in the content of the magazine, that they overlooked the advertisements in general.

Keywords: interactivity, mobile marketing, brand recall, engagement, involvement, media richness

The Relationship between Cross-media Usage and Brand Recall in Advertisements:

A Test of Customer Engagement with Print and Digital Magazine Advertisements

Today, electronic media have allowed brand communication to extend its reach. Holistic approaches are now employed to promote brand identity and build a brand community where all campaign materials are interconnected. The cross-media approach is more effective than traditional approaches owing to integrated marketing plans that help brand managers create promotional mixes that integrate both traditional and emerging media. This integration provides a number of advantages that are most likely to result in successful media campaigns. These benefits include effective brand communication, enhanced data leverage, faster distribution of information, automated trigger responses, and coordination between channels. The purpose of an integrated media campaign strategy is to provide strong coherent communications that enable advertisers to capture data from prospective consumers and promote effective management of the customer database.

New media allow advertisers to distribute promotional materials promptly and manage campaign materials simultaneously. Furthermore, in order to build a strong communication strategy it is important to employ different types of media to best transmit brand identity. A successful brand communication encourages customer loyalty and empowers the brand. Although brand identity is always determined by customer perceptions, which influence buyer performance, it is necessary to properly manage brand communication to add value to the products and services that the company offers. In this respect, it is essential that communication professionals understand the importance of the relationship between new media and brand communication.

The purpose of this study is to determine how cross-media marketing communications increase customer engagement. The greater the level of involvement a customer has with a message the more profound the effects of that message will be. This is where new media and cross-media become important assets in branding and advertising.

Literature Review

Integration of New Media with Traditional Media

Levy and O' Donoghue (2005) have observed great changes in brand communication, "The development of the Internet and the World Wide Web has changed the needs of business, the approach to business, and the speed of business" (p. 13). They are referring to the fact that present-day consumers are more demanding and knowledgeable about corporate practices. This in turn motivates companies to better communicate brand identity and provide consumers with different ways of accessing information about the company and understanding what the company represents. Current branding practice leans toward more customer familiarity, involvement and experience to enable expansion to other markets. No longer are products or services developed and then marketed to create a need; today, customer needs are studied and brands are created to satisfy those needs. New media broaden the range of options brand producers and advertisers have when tasked with crafting appropriate messages and delivering them through appropriate media. Also, selecting the right mix of media promotes better brand-customer relationships and here is where new media play an important role. Additionally, Levy and O' Donoghue (2005) observe that psychographics have become more important than demographics,

In the advertising profession, we are used to the notion of targeting demographic segments based on age, sex, and socio-demographics, but increasingly brands are

defining attitude-driven segments, behavior-driven segments, and need-stage-driven segments. Whereas the use of demographic segmentation was easy to comprehend and implement, it has been unsuccessful in bringing sense to international brands.

Segmenting by attitude, behavior, or need state enables a company to identify why certain brands are strong in some markets and weak in others (p. 16).

As soon as the target audience is identified according to lifestyle and individual attitudinal preferences, the brand manager will then attempt to provide and communicate benefits that attract and keep the consumer interested in the brand. The appropriate communication of these benefits will then allow customers to keep the products and services that brand offers in mind. Furthermore, to assure that this interaction with the customer or buyer takes place, it is important that the right combination of media is used. Media are undergoing changes and it is necessary to understand how customers interact with these media in order to assess which media to use in one's communication strategy.

Moreover, marketing communicators and advertisers use a variety of channels to deliver messages; in many cases a combination of traditional mass media and new media make for a perfect communication strategy for a particular brand. In this fashion, new trends in the ways brands communicate with their customers will generally include traditional and non-traditional channels in their media campaigns. This is due to the great diversity of customers who use different media but have similar expectations of a product. These holistic media campaigns also allow the brand to be able to reach all of these consumers at once. In addition, Levy and O'Donoghue (2005) argue that it is crucial for businesses to employ a holistic approach because it considers all the elements of a brand's association with the consumer. The goal of a holistic

approach is to use all media resources to effectively promote a consumer-based brand through consumer preferred means.

Characteristics of Traditional Media and New Media

The involvement of new media in advertising causes media campaigns to move further away from appealing to the masses and to take a much more individualistic approach to mediated communication. This is due to the fragmentation of the audience and the fact that consumers have access to more information that is useful to them in order to make better product choices. Schudson (1984) mentioned that the most significant brand choice data for customers originates in their past experience. If consumers do not have prior experience with a product, it is likely they will depend on interpersonal relationships or mass media to obtain information about the brand.

In addition, new media offer more flexibility in the way advertisers can send messages and receive faster customer feedback. For instance, the Internet makes it easier for advertisers to obtain information; cookies allow advertisers to determine how to craft messages for potential customers because new media technologies are able to store data that are highly traceable. Also, customers can personalize information and choose what promotional materials they want to receive from their preferred brands, matching these to their lifestyle and particular interests. Furthermore, according to Faber and Stafford (2005),

New media allow consumers to more easily and directly search the media to find relevant content. They no longer need to wait for others to do this for them, nor do they have to go through other people to learn this information (p. 354).

Additionally, new media enhance the way people communicate interpersonally, aid in the personalization of advertisement, and shift the way in which advertisers influence consumer decision making. At the same time, new media suffer from two barriers: credibility and intrusiveness (Faber & Stafford, 2005). Some people find that Internet offers are not very credible and consider pop-up ads to be intrusive and distracting. New media allow companies to direct more personalized or custom-made information to consumers in order to improve customer-brand communication and to influence buyer behavior.

In comparison with traditional forms of advertising, where the role of the brand producer and the advertiser was to get people to remember and recognize the brand, new media allow consumers to spend more time interacting with the brand in order to notice its uniqueness in an overstocked market. Furthermore, customers interact with multimedia content on a regular basis, which includes online video, music streaming, and online gaming. In the same way, many people also consume user-generated content that is available in many online platforms like blogs, YouTube, and Vimeo. New media employ different types of tools such as search bots, shopping bots, mobile technologies, online auctions, e-commerce, and recommendation systems made available by the Internet. Graham (2004) mentions that we are “experiencing a complex and infinitely diverse range of transformations where new and old practices and media technologies become mutually linked and fused in an ongoing blizzard of change” (p. 11). In particular, mobile advertising is very resourceful and it is empowered by linkage advertising and interactivity. But, it is necessary to understand how brand familiarity and new media relate to one another before we can understand how effective this type of advertising can be.

Brand Familiarity and New Media

New media have allowed marketing communication to grow substantially, and messages are crafted to reach cross cultural marketplaces. Because of this, it is very important for brand producers and advertisers to select the appropriate visual imagery and communication tools. According to Schroeder (2005), “The visual arts are an impressive cultural referent system that brand managers, art directors and advertising agencies draw upon for their strategic representational power” (p. 1301). Schroeder argues that strategic images can be very powerful when trying to create representations of a brand. However, according to Mikhailitchenko, Javalgi, Mikhailitchenko, and Laroche (2009), the efficiency of visual imagery tools depend on consumer memory-related aspects, such as brand awareness, prior experience with the product, and the degree of involvement that the consumer has with the brand. Additionally, when using a cross-media approach in advertising, such as a blend of a website, social media, persistent uniform resource locators (PURLs), and mobile, print and consistent representational imagery can enhance brand recall and brand familiarity. This can result in better customer relationship management, marketing communications, and brand positioning.

In sum, customers’ ability to remember brand data and familiarity with the brand are related to the connection they have with the media that brand producers use to convey brand information. According to Numberger and Schwaiger (2003), “Publishers are actively selling cross media advertising” (p. I). The authors conducted an experiment to determine the effectiveness of cross-media advertising using a combination of Internet and print. Their findings suggest that this combination is more effective than only using Internet advertising, but brand attitude was not affected by the type of medium used. Brand attitude is related to other factors

that determine the consumer's level of familiarity with the brand. This familiarity is dependent on the experience that the customer has with the brand. On the other hand, the way consumers interact with media and their user expectations will also determine the level of attention they provide to advertisements placed in these media.

However, Numberger and Schwaiger (2003) argue that, in advertising campaigns, advertisements usually form part of a media mixture, using different media. But, there is not much scholarly research on the subject. In this study, Numberger and Schwaiger discussed the effectiveness of consumers' receptivity to certain advertisements, and they compared print advertising to Internet advertisements. It was determined that the Internet involves more attention when browsing, while printed ads can be browsed over with less concentration, allowing a higher level of recall. In addition, another important difference between online and printed advertisements is that both media are consumed differently; online is more indirect while print can be interacted with on a more personal level. This implies that the user can easily dismiss online ads while using the Internet. However, both print and online advertisements provide different benefits to cross-media campaigns, especially regarding brand recall. Furthermore, exposure to advertisements with a multimodal advertising strategy leads to better brand recall and a positive brand attitude and can increase potential purchases. New media involve more than just Internet advertising. For instance, tablets are now combining the distribution of the web with the readability of print. Tablet editions allow more brand focus, which is a unique characteristic for new media. Also, tablets allow a higher level of interactivity than what we can accomplish with websites, and we can obtain similar visual aesthetics that we find in print.

New media allow us to track data and analyze information about consumer behavior; these data can be stored and studied allowing the advertiser to adapt product and service offerings to the consumer's lifestyle and habits. Cross-media marketing approaches can take these data, customize messages, and target audiences via different media channels such as websites, social media, mobile, and print. Generally, these messages are a call to action with offers that keep customers interested in the brand, fortify the customer-brand relationship, and inform them of new services. Moreover, according to Peters, Amato & Hollenbeck (2007) and Wang (2007) the increasing growth of mobile commerce offers advertisers many marketing communication opportunities, because the dynamics between advertisers and consumers can be greatly enriched (As mentioned in Wang, 2010, p.141). Furthermore, according to Charny (2001) and Shih & Shim (2002), advertisers recognize the potential of mobile advertising in order to capture the interactive nature of commercial transactions (As mentioned in Wang, 2010, p.141). Also, according to Houston and Gassenheimer (1987), "Good marketing management emphasizes the building of long-term relationships" (p. 10); cross-media marketing campaigns with the involvement of new media such as tablets can help advertisers to achieve these long term relationships with customers because new media are interactive and allow constant feedback between advertisers and customers.

New Media, Interactivity and Media Richness

Advertising focuses on the advertisers' suppositions on what is effective in terms of brand awareness. Whenever brand managers decide to use a cross-media approach and involve emerging media such as tablets, it is necessary to understand the level of interactivity that tablet editions should possess. According to McMillan and Hwang (2005), "If advertising is to be

persuasive in environments such as the Web, advertisers need to understand interactivity better so that they can more effectively engage and interact with consumers” (p. 125). Also, interactivity according to Ha and James (1998) should be well-defined in terms of the degree to which the sender and the receiver are able to meet each other’s communication requirements.

Furthermore, according to Kristof and Satran (1995), “...a good interactive product doesn’t get in the user’s way. It doesn’t use elaborate guidance schemes and symbols” and gives “them simple express routes to the information they’re looking for” (p. 50). In addition, interactivity depends on many elements that contribute to the direction and effectiveness of the communication. For instance, Massey and Levy (1999) assert that the web provides “interpersonal interactivity,” meaning that companies who possess user-friendly media employing tools such as chats or message boards facilitate the brand-consumer relationship and enable a two-way communication. This can be applied to other media such as tablets; the more interactive elements brand producers embed in the content of their ads, the more options consumers have to interact and understand the message. In the same way, the more options consumers have to browse the content, the more user control they possess. User control allows the consumer the freedom to browse through information, an ability that is limited in traditional media.

Moreover, interactivity is related to media that are rich in tools that aid the understanding of the content. Media richness theory suggests that the performance of any task will improve if the user’s needs are met by a medium's capacity to deliver information. In addition, Dennis and Valacich (1999) conclude that, “We believe that the key to effective use of media is to match media capabilities to the fundamental communication processes required to perform the task” (p.

9). Furthermore, media richness relates to the capacity of a medium to present information with different sensory cues that can aid the communication process and reduce ambiguity. These cues are related to content affordance, user perceptions, and experience when using a certain medium. Moreover, the future of cross-media and advertising lies in the way a brand presents itself. As a result, many brands focus on the need for their communication efforts to be integrated. The target for this integration is aimed at the corporate brand image, and the goal is to strengthen advertising activities. Gane and Beer (2008) mention that, “it is important that new media interactivity is understood not simply as a technical phenomenon or as a source of user freedom, but as something that has an intimate and complex connection to the underlying dynamics of contemporary capitalist culture” (p. 100). Therefore, corporate communications should offer value to consumers and potential consumers in all promotional offers. These communications will then ensure a higher customer response rate and increase customer loyalty. Additionally, new media provide advertisers with the tools to track target audience behavioral data and match these to triggers or offers that will encourage the customer to continue using a certain brand. A cross-media approach allows a more effective distribution of content, mixing the advantages of online and interactive media with the benefits of print.

Mobile Marketing

Marketing can be viewed as the interaction that exists between customers and advertisers. Mobile advertising activities increase the opportunities of interaction because they allow an immediate flow of communication between the consumer and the brand. Mobile marketing is Internet-based and it can respond effectively to customer feedback. Also, mobile marketing allows certain levels of personalization; the reason why advertisers include mobile devices in

their media campaigns and advertising activities is to use consumer feedback and tracked interests to customize communications and offers. Most significantly, mobile marketing helps collect additional data about customer preferences in order to improve the customer-business relationship and create customer lifetime value.

According to Haghirian, Madlberger, and Tanuskova (2005) personalization makes mobile advertising a very important application, since it allows the usage of collected demographic information and geographical information to target a group. The same techniques are used in magazine advertising where location is taken into account to deliver specific advertisements depending on the area and on who receives the magazine. This type of customization involves the capacity to effectively deliver customized products or services to a set of consumers. Moreover, customization seeks to improve a brand's relationship with the customer. Nevertheless, the major issue with this type of advertising is the measurement of its effectiveness, since this is an emerging form of marketing based on Internet technology. Furthermore, today many consumers are capable of engaging with their preferred brands in many ways, especially at their own convenience. Hopkins and Turner (2012) argue that,

Realizing that consumer interest can be, at best, fleeting in the mobile world, the brands able to successfully capture and hold that attention through mobile-oriented consumer rewards, discounts, and promotional incentives are the ones that will win in the end (p. 26).

The challenge for brand managers is to determine how to engage with customers in order to establish long-term relationships and how customers can engage with these brands on a regular basis. Also, customers decide how they want to engage with a certain brand; this

engagement can be via a tablet or a smartphone among others. In order for brand producers to keep customers involved with the brand it is necessary that some elements are taken into account. According to Hopkins and Turner (2012), these elements are strong content, an interactive experience, and user incentives. These elements can keep the customer interested in maintaining a relationship with the brand, especially if the content that the user is consuming is mobile-only, making these incentives exclusive. In addition, this content is generally paired with applications that allow customers to easily access account information, make online transactions, track orders, receive personalized notifications and connect with social media. Additionally, brand managers that decide to use mobile advertisements need to consider adding interactivity to help potential viewers of the advertisement become recurrent customers. Hopkins and Turner (2012) mention several examples of how interactivity can be employed: 1) click/text to call, 2) click/text to request sample, 3) click/text to request additional information, 4) click/text to enter contest or vote, 5) click/text to locate closest retail outlet, 6) click/text to receive discount or coupon, and 7) click/text to download content; these examples are regularly employed in tablet advertisements.

Consumer Advertising Engagement

Engagement is key in the effectiveness of advertising; engagement involves effects of the message, advertising recall, message involvement, message credibility, attitude towards the message, and the advertisement. Regarding advertising Wang (2006) mentions that, “Advertisers have identified engagement as a crucial component that underlies consumer brand choice in response to communications” (p. 356). Wang (2006) also addresses the difficulty in determining how consumers interact with an advertisement. One influence on engagement is the time spent

using a medium; in order for a customer to be exposed to an advertisement it is necessary that the individual spend some time using that medium. Wang mentions novelty in advertisements is also a driver for engagement because in some way surprise can increase a customer's involvement since surprise is neither predictable nor expected. Other drivers such as relevance of the advertisement and a customer's attitude toward the advertisement can affect involvement. Also, according to Wang engagement and message involvement are interrelated. In Wang's study, participants had to play an online game; next to the game an online advertisement was placed. The advertisement was set to both low and high levels of engagement. In the lower engagement condition, the participants were exposed to a non-interactive advertisement that read "Receive Your Free Sony PS3," and in the higher engagement condition participants were exposed to an online advertisement that invited them to play a game. The advertisement requested the participants to kick the field goal to receive a free PS3, which involved more interaction. The results of the study indicated that participants in the higher engagement condition exhibited higher message involvement than the participants in the lower engagement condition; 75% of the participants noticed the advertisement in the higher level of engagement while only 67% noticed the advertisement in the group exposed to a lower level of engagement. This study concludes that interactive media increase the level of engagement in advertisements, which aid advertising recall, message involvement, and message credibility.

Effectiveness of Print and Digital Magazine Advertisements

In a study conducted by *Marketing Evolution* from 2004 through 2006, television, online, and magazine ads were examined, and the results determined that magazines played an important role across the purchase funnel. Magazines produced positive results in all the media campaigns

that were analyzed within 20 different studies, but it is important to mention that print combined with other media was more effective. The study also determined three factors which contributed to the effectiveness of magazines: first, their ability to target their message in a relevant context can enhance the effectiveness of the advertisement; second, advertisers can use magazines because of their wide range of attitudinal and behavioral profiles; and third, magazine advertising may be perceived as part of the natural flow of a magazine and therefore, of value to the reader. It is only logical for advertisers to invest in a combination of print and tablet magazines to effectively promote brand identity. Print magazines allow people to know you are in business, they convey your business name and the type of products or services you offer, they demand people's attention, can be made available in other formats such as a PDF, provide high quality materials, and lastly, many people still prefer printed material because it is easy to carry and share. However, in the case of tablet editions, marketers are able to reach an audience of early adopters of tablets and mobile technology and active buyers. They place advertisements in a cutting edge medium that has all the benefits of traditional print magazines and combine both print and web capabilities.

Furthermore, a study commissioned by The Association of Magazine Media involving consumers who read digital editions of magazines via mobile apps designed for tablets and e-readers, launched an online survey among a random selection of AppTrack panel members which a total of 1,009 mobile magazine readers had completed by November of 2011. Among the results, 68% claimed that at least one person in their household owned an Apple Ipad and 40% owned an Amazon Kindle. Also, 100% claimed they have used a mobile device to download a magazine app to read an entire issue of a magazine, and 41% claimed that they

downloaded apps that enable them to view an entire issue of a magazine just like the printed version. In addition, when participants were asked the average time they spent reading or viewing electronic magazines on their mobile device in a week, 27% claimed they spent less than one hour. Also, when it comes to why they decided to read digital magazines instead of the printed version three reasons had the highest percentages:

- It's easy to access the magazine's content and articles 70%
- The portability of having all my magazines on one device 53%
- I like the interactive features like videos, photo galleries and 3D views 40%

Moreover, regarding magazine advertisements participants were asked how often they typically read or tapped on advertisements appearing in electronic magazines: always 4%, usually 14%, sometimes 55%, and never 27%. Participants were also asked if electronic ads are usually pretty annoying and 71% agreed to this statement, 70% would be interested in the ability to purchase products and services directly from articles and features in electronic magazines, 59% would be interested in the ability to purchase products and services directly from the advertisements, 52% thought that electronic ads provided more information than the printed advertisement, and 44% agreed with the fact that electronic advertisements are an important part of an electronic magazine. Overall, both printed and digital magazines offer numerous benefits for advertisers, but digital magazines might facilitate purchase if offers are embedded in those advertisements. In addition, Hopkins and Turner (2012) stated that tablet users are more accepting of advertising and more likely to purchase after viewing an ad..." (p. 30).

Additionally, print and mobile advertisements are important elements of any marketing campaign. The question to ask ourselves is how important is the assessment of effects of new

media in advertising, and how can brand managers ensure that they are reaching their customers in the desired manner? First, there are many advantages to print: it stimulates the senses, and it is accessible and portable. Many people prefer print because they can fold it or even cut out and keep coupons. The quality of the printed piece is also vital for people's preference of print. Furthermore, print media contains fewer distractions while reading; because of this the reader can focus entirely on the content. Second, print is ideal for marketing since it is available in several formats and can be easily accessed, which is not the same for tablets as a medium. Print is also engaging, versatile, and creative and when combined with other media, they are highly effective. Third, print media are able to draw customers' attentions with valuable offers or services. Print media work because customers invest time and attention and actively seek entertainment and information; this also applies to digital magazines. Moreover, advertisements can be paired with the editorial content of a magazine, which provides advertisers the right context for a related brand campaign. Fourth, since readers of print can easily maintain their attention on longer articles because they are less distracted, digital magazine content needs to be designed to maintain the reader's attention and create that customer involvement; here is where interactivity plays an important role. Lastly, the personalization of publications adds to the effectiveness of both print and digital media. This adaptability allows advertisers and brand managers to choose exactly the right medium for their brand whether it is print or digital.

Tablet Users and Purchase Intent

On a study conducted by The Online Publishers Association (OPA) titled "A Portrait of Today's Tablet User – Wave II," certain trends on the attitudes and behaviors of tablet users were discovered. The study determined several dominant activities which were accessing content

and information on the device (94%), accessing the internet (67%) and checking email (66%). The study also revealed that tablet users' primary content-related activities include watching video (54%), getting weather information (49%), and accessing national news (37%), and entertainment content (36%). In order to determine the behavior of tablet users an online survey was conducted, and a total of 2,540 people between the ages of 8 and 64 people responded. The survey determined that within the U.S. tablet adoption is at 31% in 2012, which is equal to 74 million tablet users. There was a 12% increase of tablet users from 2011 (28 million tablet users) and this amount is expected to reach 47% (117 million tablet users) by 2013. The results also determined that users are currently paying for content with 61% of tablet users having purchased tablet content in the past year. This increases the possibilities for publishers and advertisers to gain customers since they are willing to invest in digital content.

Furthermore, the study determined that 38% of tablet users have made a purchase after being exposed to tablet advertising. The study also determined that tablet users purchased an average of \$359 in products from the device over the past year. Also, 29% of the tablet users indicated that tablet advertisements were an important driver for them to conduct research on products, and 23% admitted having clicked on an advertisement.

Other key findings determined by this study were as follows: 1) 74% of tablet users are using the device daily and 60% use it several times a day, 2) tablet users spend an average of 13.9 hours per week with their tablets, 3) 92% of video watched on the tablet is from news and entertainment, 4) 23% of all tablet apps downloaded in the past year were paid for, and 5) the tablet app market has doubled with an estimated \$2.6B spent in 2012, an increase from \$1.4B in

2011. This study supports the claim that advertisers should include more mobile advertising in their marketing plans.

Discussion

Significance of the Study

A combination of traditional and new media in cross-media marketing approaches has the capacity to reach desired audiences with different media options at the same time. This holistic approach allows the same offers to be available for different types of consumers. Furthermore, customers are more inclined to use products or services that adapt to technological advancements using media that they are familiar with. For this reason, conveying the right message through the right means aids brand recall, retains customers, and ensures effective brand communication.

The present study is important because it determines whether emerging media complement existing multimodal approaches to communication and help advertisers consider different ways to deliver messages in terms of customer media preference. Studies on media richness have only explored how brand producers choose their media but have not focused on the user's perceptions and effects of richer interactive content.

Research Questions and Hypotheses

This study will address the following questions:

RQ1: Will exposure to interactive magazine advertisements in tablets result in higher levels of brand recall than exposure only to advertisements in print media?

RQ2: Will exposure to interactive magazine advertisements in tablets result in higher customer involvement?

RQ3: Will the exposure to new media, such as an interactive digital magazine, increase purchase intent?

This study will also test the following hypotheses:

H1: An interactive tablet edition advertisement will generate significantly higher consumer involvement with the brand.

H2: Brand advertisements delivered through a print magazine will result in significantly lower levels of brand recall than advertisements delivered on tablets editions.

Method

To test the effectiveness of selected advertisements, a randomized controlled trial (RCT) was used. This experiment compared one treatment group with a control group. A magazine was selected that has two published forms: a printed edition and a tablet edition.

- **Group 1 (control group):** was exposed to advertisements in the printed edition.
(No interactivity)
- **Group 2:** was exposed to tablet edition advertisements. (Interactivity)

A post-test was administered in the form of a questionnaire to determine brand awareness and purchase intention by participants in all groups. It was used to determine whether interactivity played a significant role regarding these two variables.

Results

A total of 34 participants were asked eight questions to determine whether brand recall, purchase intent, and brand involvement was higher when reading the printed version or was higher while being exposed to the tablet version of the February 2012 *Wired* magazine issue. The participants were given 30 minutes, and a total of 16 advertisements were selected that were in

both the digital and print versions. The brands selected were Kindle, Mercedes Benz, IBM, TAGHeuer, Mazda, Rolex, Citi, Ericsson, Toyota, Microsoft, Chevy, Cadillac, Neat, Asus, Neat, and Red Bull.

Brand recall was measured by asking participants the following question:

1. Do you remember seeing an advertisement for any of the following brands?

In the print version the highest percentages of brand recall were achieved by Rolex with 70.59%, Microsoft 64.71%, Mercedes Benz 52.94%, Mazda 52.94%, IBM 47.06%, TAGHeuer 47.06%, and Citi 47.06% (see Table 1).

In the tablet version, the highest percentages of brand recall were achieved by Rolex with 47.06%, Kindle 47.06%, Toyota 41.18%, Microsoft 41.18%, Red Bull 41.18%, and Mercedes Benz 37.50%. The advertisement that produced the higher amount of recall was Rolex. Rolex did not include additional features such as question response (QR) codes or links in either the print or tablet version of the ad. Microsoft and Mercedes Benz were among the highest and included embedded links that provided more information regarding the brand.

Table 1

Brand Recall for Print and Tablet Media

Print		Tablet	
Rolex	70.59%	Rolex	47.06%
Microsoft	64.71%	Kindle	47.06%
Mercedes Benz	52.94%	Toyota	41.18%
Mazda	52.94%	Microsoft	41.18%
IBM	47.06%	Red Bull	41.18%
TAGHeuer	47.06%	Mercedes Benz	35.29%
Citi	47.06%	TAGHeuer	29.41%
Ericsson	35.29%	Citi	29.41%
Toyota	35.29%	Chevy	29.41%
Cadillac	35.29%	Asus	23.53%
Kindle	29.41%	Cadillac	23.53%
Red Bull	29.41%	IBM	23.53%
Asus	23.53%	Mazda	17.65%
Chevy	17.65%	Ericsson	17.65%
Neat	5.88%	1&1	5.88%
1&1	0%	Neat	0%

Purchase intent was measured by responses to the following question:

2. For which of the following brands would you be willing to purchase a product?

For the printed version participant purchase intention inclined mostly towards Toyota 47.06%, Kindle 41.18%, Mercedes Benz 41.18%, Mazda 41.18%, Red Bull 41.18%, Microsoft 35.29%, and Asus 35.29% (see Table 2).

In the tablet version, the highest percentages of purchase intent were achieved by Red Bull 41.18% %, Kindle 29.41%, Toyota 29.41%, Mercedes Benz 23.53%, IBM 23.53%, and Microsoft 23.53%.

Toyota scored high in both printed and tablet versions. The advertisement included embedded links in the printed version and had the highest amount of interactivity compared to other ads included in the tablet version.

Table 2

Purchase Intent for Print and Tablet Media

Print		Tablet	
Toyota	47.06%	Red Bull	41.18%
Kindle	41.18%	Kindle	29.41%
Mercedes Benz	41.18%	Toyota	29.41%
Mazda	41.18%	Mercedes Benz	23.53%
Red Bull	41.18%	IBM	23.53%
Microsoft	35.29%	Microsoft	23.53%
Asus	35.29%	Mazda	17.65%
Rolex	29.41%	Rolex	17.65%
Ericsson	23.53%	Cadillac	17.65%
TAGHeuer	17.65%	Citi	11.76%
IBM	11.76%	Asus	11.76%
Citi	11.76%	Ericsson	5.88%
Chevy	11.76%	TAGHeuer	0%
Cadillac	0%	Chevy	0%
Neat	0%	Neat	0%
1&1	0%	1&1	0%

Customer engagement was measured by responses to the following question:

3. Were any ads for the following brands engaging?

Participants exposed to the printed version considered advertisements for Rolex 47.06%, Microsoft 23.53%, Toyota and Mazda tied at 17.65%, (see Table 3) engaging.

Participants exposed to the tablet version considered advertisements for Toyota 29.41%, Kindle 23.53%, Mazda 17.65%, and Microsoft 17.65% engaging. For the tablet version Toyota achieved the highest amount of consumer engagement and was the advertisement that used the most additional features.

Table 3

Brand Engagement for Print and Tablet Media

Print		Tablet	
Rolex	47.06%	Toyota	29.41%
Microsoft	23.53%	Kindle	23.53%
Mazda	17.65%	Mazda	17.65%
Toyota	17.65%	Microsoft	17.65%
Mercedes Benz	11.76%	Mercedes Benz	11.76%
TAGHeuer	11.76%	Asus	11.76%
Asus	11.76%	TAGHeuer	5.88%
Red Bull	11.76%	Rolex	5.88%
Kindle	5.88%	Chevy	5.88%
Citi	5.88%	Cadillac	5.88%
Ericsson	5.88%	Red Bull	5.88%
Neat	5.88%	IBM	0%
IBM	0%	Citi	0%
Chevy	0%	Ericsson	0%
Cadillac	0%	Neat	0%
1&1	0%	1&1	0%

4. Which of the following brands used a QR code in an advertisement?

Participants exposed to the print version claimed that Citi 11.76%, IBM 5.88%, Ericsson 5.88%, Chevy 5.88%, and Red Bull 5.88% used QR codes. Only Mercedes Benz and Red Bull used QR codes in their advertisements.

Participants exposed to the tablet version did not recall any brands that were associated with a QR code; neither of the ads included a QR code (see Table 4).

Table 4

QR Codes for Print and Tablet Media

Print		Tablet	
Citi	11.76%	Kindle	0%
IBM	5.88%	Mercedes Benz	0%
Ericsson	5.88%	IBM	0%
Chevy	5.88%	TAGHeuer	0%
Red Bull	5.88%	Mazda	0%
Kindle	0%	Rolex	0%
Mercedes Benz	0%	Citi	0%
TAGHeuer	0%	Ericsson	0%
Mazda	0%	Toyota	0%
Rolex	0%	Microsoft	0%
Toyota	0%	Chevy	0%
Microsoft	0%	Cadillac	0%
Cadillac	0%	Asus	0%
Asus	0%	Neat	0%
Neat	0%	1&1	0%
1&1	0%	Red Bull	0%

5. Did any of the following brands use embedded links in the advertisement?

Participants exposed to the printed version claimed that 17.65% of the time Microsoft used embedded links, Kindle 11.76%, Mercedes Benz 11.76%, IBM 11.76%, Mazda 11.76%, Citi 11.76%, Asus 11.76%, and Red Bull 11.76% (see Table 5).

Participants exposed to the tablet version claimed that 17.65% of the time Microsoft used embedded links, Kindle 5.88%, IBM 5.88%, Citi 5.88%, Ericsson 5.88%, Toyota 5.88%, Chevy 5.88%, Cadillac 5.88%, and Asus 5.88%.

All advertisements in the printed version included embedded links except Rolex, Citi, and Chevy. In the tablet version all advertisements included embedded links except Mercedes Benz, TAGHeuer, Rolex, Citi, Chevy, Asus, Neat, 1&1, and Red Bull which does not meet the expectations of tablet version advertisements where more interactivity is anticipated and might help increase consumer involvement with the brand.

Table 5

Embedded Links for Print and Tablet Media

Print		Tablet	
Ericsson	17.65%	Microsoft	17.65%
Microsoft	17.65%	Kindle	5.88%
Kindle	11.76%	IBM	5.88%
Mercedes Benz	11.76%	Citi	5.88%
IBM	11.76%	Ericsson	5.88%
Mazda	11.76%	Toyota	5.88%
Citi	11.76%	Chevy	5.88%
Asus	11.76%	Cadillac	5.88%
Red Bull	11.76%	Asus	5.88%
Rolex	5.88%	Mercedes Benz	0%
Toyota	5.88%	TAGHeuer	0%
Chevy	5.88%	Mazda	0%
TAGHeuer	0%	Rolex	0%
Cadillac	0%	Neat	0%
Neat	0%	1&1	0%
1&1	0%	Red Bull	0%

6. Did you find interactive ads more engaging than non-interactive ads?

When exposed to the printed version 47.06% of the participants considered that it was not applicable to printed magazines.

When exposed to the tablet version 82.35% of the participants considered that interactive ads were more engaging than non-interactive ads, while 5.88% thought that they were not, and 11.76% thought it was not applicable (see Table 6).

Table 6

Interactive Advertisements for Print and Tablet Groups

Print		Tablet	
Yes	41.18%	Yes	82.35%
No	11.76%	No	5.88%

7. Is it likely for you to buy a product directly from an advertisement for the following brands?

When exposed to the printed version 35.29% of the time participants admitted that they would purchase from Kindle, 29.41% from Rolex, 29.41% from Microsoft, 17.65% from Citi, and 17.65% from Red Bull (see Table 7).

When exposed to the tablet version 11.76% of the time participants admitted that they would purchase from Kindle, 11.76% from Red Bull, 11.76% from Microsoft, and 11.76% from Toyota.

Participants exposed to the printed version had a higher purchase intention than those exposed to the tablet version. Nevertheless, there was a significant increase for Toyota and IBM taking into account that 52.94% of the participants for the tablet condition did not answer and both of these ads included additional features.

Table 7

Direct Purchase for Print and Tablet Media

Print		Tablet	
Kindle	35.29%	Kindle	11.76%
Rolex	29.41%	Toyota	11.76%
Microsoft	29.41%	Microsoft	11.76%
TAGHeuer	17.65%	Red Bull	11.76%
Citi	17.65%	IBM	5.88%
Red Bull	17.65%	Rolex	5.88%
Mazda	11.76%	Asus	5.88%
Asus	11.76%	Mercedes Benz	0%
Mercedes Benz	11.76%	TAGHeuer	0%
Toyota	5.88%	Mazda	0%
Chevy	5.88%	Citi	0%
Cadillac	5.88%	Ericsson	0%
IBM	0%	Chevy	0%
Ericsson	0%	Cadillac	0%
Neat	0%	Neat	0%
1&1	0%	1&1	0%

At the end of the survey participants were asked:

8. Do you think that additional features in advertisements (links, QR codes, video, and audio) help increase your involvement with the brand?

The majority of participants exposed to the print and tablet versions of the magazine thought that additional features in advertisements help increase consumer involvement with the brand (see Table 8).

Table 8

Additional Features and Involvement for Print and Tablet Groups

Print		Tablet	
Yes	76.47%	Yes	82.35%
No	17.65%	No	17.65%

If used in a cross-media marketing strategy these would be the anticipated results for brand recall, purchase intent and brand engagement.

a.) Do you remember seeing an advertisement for any of the following brands?

Rolex and Microsoft received the highest percentage of brand recall, but only Microsoft used additional features. Kindle, IBM, TAGHeuer, Mazda, Citi, Toyota, and Red Bull also received relatively high percentages of recall taking into account the number of participants in the sample (see Table 9).

Table 9

Brand Recall for Combined Print and Tablet Media

Combined Print and Tablet	
<hr/>	
Rolex	58.82%
Microsoft	52.94%
Mercedes Benz	44.12%
Kindle	38.24%
TAGHeuer	38.24%
Citi	38.24%
Toyota	38.24%
IBM	35.29%
Mazda	35.29%
Red Bull	35.29%
Cadillac	29.41%
Ericsson	26.47%
Chevy	23.53%
Asus	23.53%
Neat	2.94%
1&1	2.94%

b.) For which of the following brands would you be willing to purchase a product?

The highest percentages of purchase intent when advertising with both versions of the magazine produced a higher percentage for Kindle, Mercedes Benz, Toyota, Microsoft, and Red Bull. Red Bull achieved the highest amount of recall and used additional features in both print and tablet advertisements (see Table 10).

Table 10

Purchase Intent for Combined Print and Tablet Media

Print	Tablet
Red Bull	41.18%
Toyota	38.24%
Kindle	35.29%
Mercedes Benz	32.35%
Mazda	29.41%
Microsoft	29.41%
Rolex	23.53%
Asus	23.53%
IBM	17.65%
Ericsson	14.71%
Citi	11.76%
TAGHeuer	8.82%
Cadillac	8.82%
Chevy	5.88%
Neat	0%
1&1	0%

c.) Were any ads for the following brands engaging?

The highest amount of brand engagement was achieved by Toyota and Microsoft. Both used additional features in advertisements in both print and tablet advertisements (see Table 11).

Table 11

Brand Engagement for Combined Print and Tablet Media

Combined Print and Tablet	
<hr/>	
Toyota	23.53%
Microsoft	20.59%
Mazda	17.65%
Kindle	14.71%
Rolex	14.71%
Mercedes Benz	11.76%
Asus	11.76%
TAGHeuer	8.82%
Red Bull	8.82%
Citi	2.94%
Ericsson	2.94%
Chevy	2.94%
Cadillac	2.94%
Neat	2.94%
IBM	0%
1&1	0%

Limitations

This study was limited in various aspects. 1) There was a small sample. 2) Some participants exposed to the tablet condition were not familiar with tablet use and were easily distracted since they were not used to tablet reading. 3) Many advertisements included in the tablet edition did not include sufficient interactive features as expected. 4) To really test the effectiveness of tablet and print magazine advertisements in the future it would be best to test subjects twice with both conditions, but this requires more time and resources.

Conclusions

Results were analyzed for both tablet and print magazine conditions.

RQ1: Will exposure to interactive magazine advertisements in tablets result in higher levels of brand recall than exposure only to advertisements in print media? Results demonstrate that participants who were exposed to the printed version of the magazine had relatively high percentages of recall for most of the brands except for Chevy, Neat, and 1&1 where recall was below 20%. On the other hand, recall was also relatively high on the tablet condition, and only Mazda, Ericsson, Neat, and 1&1 obtained percentages below 20%, but, Kindle, Toyota, and Red Bull all obtained percentages above 40%.

RQ2: Will exposure to interactive magazine advertisements in tablets result in higher customer involvement? Participants exposed to the tablet edition were asked if interactive ads were more engaging than non-interactive ads, and 82.35% agreed that they were. But, when asked if they found advertisements in that tablet condition to be engaging, only Kindle, Toyota, Chevy, and Cadillac received higher percentages than in the print condition. Nevertheless, the

highest level of interactivity was accomplished by Toyota with 29.41%, the highest when compared to all other tablet and print advertisements selected for the study.

RQ3: Will the exposure to new media, such as an interactive digital magazine, increase purchase intent? Exposure to the tablet version did not increase purchase intent. Participants exposed to the print version demonstrated more willingness to buy from certain brands. Toyota achieved the highest percentage of purchase intent with 47.06%.

H1: An interactive tablet edition advertisement will generate higher consumer involvement with the brand. H1 was supported when participants were asked if they considered that interactive ads were more engaging than non-interactive ads $X^2 (2, N = 24) = 13.5, p < .000$ in both print and tablet conditions: 21 responded yes, 3 responded no, but 10 reported it was not applicable.

H2: Brand advertisements delivered through a print magazine will result in significantly lower levels of brand recall than advertisements delivered on tablet editions. H2 was not supported; participants exposed to print advertisements demonstrated significantly higher levels of brand recall than tablet advertisements $t (1) = 5.45, p = < .000$. Tablet advertisement recall was affected by the small amount of interactive advertisements found in the digital version.

Brand advertisements when delivered appropriately with higher interactive elements in digital magazines can help increase consumer involvement with the brand. The more involved the consumer is with the advertisement, the more recall will result from this interaction. This interaction was supported with the Toyota Prius advertisement. Another significant issue that affected brand recall in the study was brand familiarity and how much attention the reader paid to advertisements. Most of the participants were so immersed in the content from the articles,

including the most interactive ones, that most of them disregarded the advertisements in general. Because of this, it is important for advertisers to deliver content in their ads that can be engaging.

The Toyota advertisement in general received high consumer response due to several reasons. First, the brand used a cross-media brand communication strategy in order to transmit its brand image. Second, it was the advertisement with the most interactivity. Third, it employed the correct use of affordance. The options menu in the interactive advertisement allowed the user to select the feature of the car s/he wished to interact with. Whenever the user clicks on an option, the selected element on the advertisement is highlighted. Affordance is also observed in *the learn more* button, located at the bottom left of the advertisement. It linked the user to a Toyota website that allowed the user access to more media, links, and photos. These *learn more* buttons were also used in several advertisements in the tablet edition as embedded links.

Furthermore, the benefits of integrating interactivity into advertisements allow the consumer to be drawn in by the content. The tablet version provides more information about the elements within the advertisement that the traditional printed version cannot provide. In the printed version, a consumer might be intrigued by the graphics and aesthetics of the design but would not be able to determine what the elements signify. The combination of both printed and digital versions of advertisements is very effective for integrated marketing campaigns. The Toyota advertisement is a great example of how cross-media marketing approaches have the capacity of reaching desired audiences with different media preferences at the same time. This holistic approach also allows the same offers to be available to different types of consumers. It is also necessary to note that emerging media are a complement to existent multimodal approaches to communication and will help advertisers consider different ways to deliver messages in terms

of customer media preference. Today, advertisements are increasingly focused on users and how they interact with the brand, but the results show that much needs to be done, since more links appeared in the print versions than in the tablet versions. This also relates to the use of QR codes since only two of the selected advertisements used QR codes. It is easier for print users to *learn more* about the brand in a mobile world where they only have to scan the bar code, than it is to type in the uniform resource locator (URL) afterwards in any wireless device.

The intention is for the customer to engage with the brand in order to raise brand awareness and purchase intention. Also, with new media, advertisers are able to engage in personalized communications and targeted messages, capture prospect consumers, and increase the reach of the brand's key message since clicks and taps are highly traceable. Lastly, with the availability of tablets and other rich media types, marketers are able to reach a specialized audience and are able to place ads in a cutting edge medium that offers users the benefits of both printed magazines and the web.

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